TKACHENKO, A.G.

Some problems of designing large mines. Ugol' 39 no.1:9-13 Ja '64. (MIRA 17:3)

KHRUSHCHEV, N.S.; PODGORNYY, N.V.; ZASYAD'KO, A.F.; RUDAKOV, A.P.; KAZANETS, I.P.; SHILIN, A.A.; MEL'NIKOV, N.V.; BURMISTROV, A.A.; SHEVCHENKO, V.V.; MAYAKOV, L.I.; ROZENKO, P.A.; KUZ'MICH, A.S.; ZADEMIDKO, A.N.; BRATCHENKO, B.F.; STRUYEV, A.I.; KRASNIKOVSKIY, G.V.; BOYKO, A.A.; KAGAN, F.Ya.; USKOV, A.A.; VLADYCHENKO, I.M.; TOPCHIYEV, A.V.; DEGTYAREV, V.I.; KHUDOSOVTSEV, N.M.; GRAFOV, L.Ye.; IVANOV, V.A.; KRATENKO, I.M.; GOLUB, A.D.; IVONIN, I.P.; SAVCHENKO, A.A.; ROZHCHENKO, Ye.N.; CHERNEGOV, A.S.; MARKELOV, M.N.; LALAYANTS, A.M.; GAPONENKO, F.T.; POLUEKTOV, I.A.; SKLYAR, D.S.; PONOMARENKO, N.F.; POTAPOV, A.I.; POLYAKOV, N.V.; SUBBOTIN, A.A.; POLSTYANOY, G.N.; TRUKHIN, P.M.; TKACHENKO, A.G.; OSTROVSKIY, S.B.; NYRTSEV, M.P.; DYADYK, I.I.; SHPAN'KO, T.P.; RUBCHENKO, V.P.

Kondrat Ivanovich Pochenkov; obituary. Sov. shakht. 11 no.9: 48 S '62. (MIRA 15:9)
(Pochenkov, Kondrat Ivanovich, 1905-1962)

MAN'KINA, N.N., kand.tekhn.nauk; TKACHENKO, A.G., inzh.;
BUYNOVSKAYA, L.G., inzh.

Method of detecting the formation of iron oxide deposits on the inner heating surfaces of high-pressure boilers. Teploenergetika 7 no.9:30-34 S '60. (MIRA 14:9)

1. Vsesoyuznyy teplotekhnicheskiy institut i Kiyevenergo.
(Iron oxides) (Boilers--Incrustations)

TKACHENKO, A.G., gorn.inzh.

Some problems of the expansion of hydraulic coal mining. Ugol' 35 no.6:45-50 Je '60. (MIRA 13:7)
(Hydraulic mining)

TKACHENKO, A.G.

Expansion of coal mining in the Kazakh S.S.R. Ugol' 34 no.7: 25-30 Jl '59. (MIRA 12:10)
(Kazakhstan--Coal mines and mining)

BABAYEV, E.A. [Babaiev, E.O.]; TKACHENKO, A.I.; ZIL'BERMAN, B.P.;
LIFORENKO, B.L.

Design of molded light weight heels. Leh. prom. no.3:78-79
Jl-S '65. (MIRA 18:9)

TKACHENKO, A.I.

Protect and restore floodplain forests. Okhr. prir. Mold. no.3:100-105 '65. (MIRA 18:10)

SHADRIN, L.N.; TKACHENKO, A.I.

Drilling of gas wells in the Igrim field. Gaz. prom. 7 no.6:
6-9 '62. (MIRA 17:6)

TKACHENKO, A.I.

From the past of Moldavian forests. Okhr. prir. Mold. no.2:27-41 '61. (MIRA 15:8)

(Moldavia--Forests and forestry)

TKACHENKO, A.I.

Concerning reforestation in the floodplain of the Prut River.
Okhr. prir. Mold. no.2:53-56 '61. (MIRA 15:8)
(Prut Valley--Afforestation)

FARNIYEVA, O.V., kand.tekhn.nauk; TKACHENKO, A.I., inzh.

Prospects in the use of the gluing method for the assembly of shoe components. Kozh.-obuv.prom. 3 no.10:28-29 O '61.
(MIRA 14:10)

(Shoe manufacture)
(Gluing)

FEDORENKO, A.P.; TKACHENKO, A.I.

Effect of DDT and benzene hexachloride dusts on partridges. Dop. AN URSR no.7:974-977 '60. (MIRA 13:8)

1. Institut zoologii AN USSR. Predstavleno akademikom AN USSR V.G. Kas'yanenko [V.H.Kas'ianenko].
(Partridges) (Insecticides)

FARNIYEVA, O.V.; TKACHENKO, A.I.; RODIVILOVA, L.A.; BAYBAKOV, K.P.;
VLASOVA, K.N.

Use of polyamide glues for assembling parts of shoe uppers.
Kozh.-obuv. prom. no.8:17-20 Ag '59. (MIRA 13:1)
(Shoe manufacture)

CA TKACHENKO, A.I.

11G

Serocoagulant reaction with calcium chloride in rheumatism in children. A. I. Tkachenko (Voronezh Med. Inst.). *Voprosy Pediat. i Okhrany Materinstva i Detstva* 19, No. 5, 12 6(1951).—The Cavash technique of the test (*Problemy Tuberk.* No. 2(1936 , is a satisfactory indicative method. The narrowest width of coagulation "ribbon" appears in cases with exudative character. Shift of the test toward a wide ribbon occurs in productive forms of the inflammation, such as nonjoint rheumatism, cardiac attacks, etc. The test does not parallel the erythrocyte pptn.-rate test.

G. M. Kosolapoff

TKACHENKO, A.I.; NIKOLAYEVA, L.P.

New occurrences of alder in Moldavia. Izv. AN Mold. SSR no.10:24-28 '63. (MIRA 18:5)

BORKOVSKAYA, L.V.; GULYANSKAYA, Ye.A.; ZYKUNOVA, K.I.;
LITOVCHENKO, Ye.P.; PERK, M.G.; RASSOKHIN, V.V.;
kand. tekhn. nauk; TKACHENKO, A.I.; STANKOV, N.V.,
inzh., retsenzent; ALEKSEYEVSKIY, G.V., inzh., retsenzent;
PIONTEK, Ye.I., inzh., red.

[Album of assignments for executing assembly drawings] Al'bom zadanii dlia vypolneniia sborochnykh chertezhei. [By] L.V.Borkovskaia i dr. Moskva, Mashinostroenie, 1964. 72 p.
(MIRA 17:9)

TKACHENKO, A.I.

Teeth arrangement on cone roller bits. Neft.khoz. 34 no.3:20-23
Mr '56. (MIRA 9:7)
(Oil well drilling--Equipment and supplies)

TKACHENKO, A.I.; MORDVIN, L.N.

Groznyy workers are using three-blade bits. Neftianik 3 no.4:9-10 Ap '58. (MIRA 11:5)

(Groznyy Province--Boring machinery)

TKACHENKO, A.I., inzh.

Graduated gas pipelines. Stroi.truboprov. 4 no.12:9 D '59.
(MIRA 13:5)

(Gas, Natural--Pipelines)

TKACHENKO, A.I.

A good manual for metal fitters. Neftianik 7 no.9:32 S '62.
(MIRA 16:7)

(Oil well pumps)

FARNIYEVA, Oktyabrina Vasil'yevna; TKACHENKO, Agnessa Iolevna;
PIMENOV, V.I., retsenzent; GONCHAROVA, I.V., red.;
DUKHOVNYY, F.N., red.

[Methods of glue assemblage of shoe upper parts] Metody kleevoi sborki detalei verkha obuvi. Moskva, Izd-vo "Legkaia industriia," 1964. 141 p. (MIRA 17:5)

FARNIYEVA, O.V., kand.tekhn.nauk; TKACHENKO, A.I., inzh.

Use of gluing methods in the assembly of shoe-upper parts. Nauch.-issl.trudy Ukr NIIKP no.13:143-155 '62. (MIRA 18:2)

TKACHENKO, A.M.

Analysis of the technological idling of self-propelled boring rigs.
Trudy Inst. gor. dela AN Kazakh. SSR 17:17-34 '65. (MIRA 18:9)

TKACHENKO, A.M.

KUNTUKOV, Yu.G., inzh; TKACHENKO, A.M., inzh.

The SBK-4 boring car. Bezop.truda v prom. 2 no.4:26-27 Ap '58.
(Mining machinery)
(MIRA 11:4)

TKACHENKO, A.M.

SHARIPOV, Vakhit Sharipovich, kand.tekhn.nauk; **KUNTUKOV**, Yuriy Grigor'yevich, inzh.; **MUZGIN**, Sergey Spiridonovich, kand.tekhn.nauk; TKACHENKO, Artem Mikhaylovich; TRET'YAKOV, Aleksey Mikhaylovich, inzh.; SHCHERBAK, Georgiy Sergeyevich, inzh.; TARASOV, L.Ya., red.; PARTSEVSKIY, V.N., red.izd-va; ATTOPOVICH, M.K., tekhn.red.

[Hole drilling equipment] Karetki i agregaty dlia bureniia shpurov. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1959. 134 p. (MIRA 12:4)

1. Institut gornogo dela AN KazSSR (for all except Tarasov, Partsevskiy, Attapovich).

(Boring machinery)

TKACHENKO, A.M.

Selecting an efficient design for the turn mechanism of an automatic feeder. Trudy Inst. gor. dela AN Kazakh. SSR no.3: 85-90 '58.

(Rock drills) (MIRA 11:6)

RAYKHSHTAT, G.N.; SHAPIRO, A.A.; TKACHENKO, A.M.; STYCHINSKIY, G.A.

Diptherial bacteria carrier state among immune children in a collective. Zhur. mikrobiol.,epid. i immun. 40 no.9:140 S'63.
(MIRA 17:5)

1. Iz Sanitarno-epidemiologicheskoy stantsii Sverdlovskogo rayona Moskvy.

SHARIPOV, V.Sh.; TKACHENKO, A.M.

Classification of boring rigs. Trudy Inst. gor. dela AN Kazakh. SSR 13:33-41 '64. (MIRA 17:7)

TKACHENKO, A.M.

Determination of the antibiotic sensitivity and the phage sensitivity of freshly-isolated dysenterial cultures. Antibiotiki 5 no.1:84-87 Ja-F '60. (MIRA 13:8)

1. Laboratoriya sanitarno-epidemiologicheskoy stantsii Sverdlovskogo rayona Moskvy (zav. bakteriologicheskim otdelom Yu.I.Litinskiy).
(SHIGELLA) (BACTERIOPHAGE) (ANTIBIOTICS)

LITINSKIY, Yu.I.; KAGANOVSKAYA, S.N.; ZEL'MANOVICH, R.Ya.; TKACHENKO, A.M.

Exact determination of serotypes of Salmonellas in the district laboratory. Lab.delo 6 no.3:39-41 My-Je '60. (MIRA 13:7)

1. Sanitarno-epidemiologicheskaya stantsiya (glavnyy vrach M.G. Gilel's) Sverdlovskogo rayona, Moskva.
(SALMONELLA)

SHARIPOV, Vakhit Sharipovich; MUZGIN, Sergey Spiridonovich; BUPEZHANOV, Mukhit Kuldzhanovich; TKACHENKO, Artem Mikhaylovich; ARTAMONOVSKIY, Oleg Yur'yevich; KULAKOV, Arkadiy Yakovlevich. Prinimali uchastiye: KAZYBEKOV, D.M.; IBRAYEV, Sh.I.; ISTOMIN, S.N., otv.red.; GEYMAN, L.M., red.izd-va; SIPYAGINA, Z.A., red.izd-va; SAL'TSOVSKIY, M.S., red.izd-va; MAKSIMOVA, V.V., tekhn. red.

[Self-propelled machines for underground workings of ore deposits] Samokhodnye mashiny dlia podzemnoi razrabotki rudnykh mestorozhdenii. By V.Sh.Sharipov i dr. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1961. 258 p. (MIRA 14:12)

(Mining machinery)

ROGACHEV, Ivan Sergeyevich, kand. tekhn.nauk, dotsent; TKACHENKO, Anatoliy Nikolayevich, assistent

Magneto generators of unipolar pulses with external rectification. Izv. vys. ucheb. zav.; elektromekh. 3 no.4:40-47 '60. (MIRA 13:9)

1. Zaveduyushchiy kafedroy elektricheskikh mashin Khar'kovskogo politekhnicheskogo instituta (for Rogachev). 2. Kafedra elektricheskikh mashin Khar'kovskogo politekhnicheskogo instituta (for Tkachenko).
(Electric generators)

S/103/61/022/012/013/016
D201/D305

9,4160

AUTHOR: Tkachenko, A. N. (Leningrad)

TITLE: The dynamics of photoelectric amplifier circuits

PERIODICAL: Avtomatika i telemekhanika, v. 22, no. 12, 1961, 1673-1781

B

TEXT: The author considers a photoelectric d.c. amplifier with negative feedback, and gives in operational form the transfer functions of its parts and of its whole circuit. He states that in the design of such amplifiers with rigid feedback two alternatives are possible: To find for a given W_{el} the parameters of a stabilization link which would guarantee an acceptable quickness of response or to determine which value of the vacuum tube amplifier gain W_{el} is admissible for a given quickness of response. The most effective method of design is found to be that of setting the roots of the characteristic equation on the complex plane. It is stated that calculations and experiments carried out by the author have shown that

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The dynamics of ... S/103/61/022/012/013/016
D201/D305

one of the most acceptable ways of setting the roots of the characteristic equation is the case when there is a pair of complex roots nearest to the imaginary axis, and all remaining roots are real which corresponds to a high degree of static stability and to a fast response. The author then discusses the stabilization circuits of the amplifier, their characteristic equation and the method of solving the latter. For the case of a photoelectric amplifier with flexible feedback the transfer function of the whole system is again derived and the design discussed. The author acknowledges the helpful suggestions of S. G. Rabinovich. There are 4 figures and 11 references: 9 Soviet-bloc and 2 non-Soviet-bloc.

SUBMITTED: June 21, 1961

Card 2/2

ROGACHEV, I.S., dotsent, kand.tekhn.nauk; TKACHENKO, A.N., kand.tekhn. nauk, starshiy prepodavatel'

"Electromechanical inductor generators" by V.S.Sharov. Reviewed by I.S.Rogachev, A.N.Tkachenko. Izv.vys.ucheb.zav.; elektromekh. 7 no. 3:391-392 '64. (MIRA 17:5)

1. Zaveduyushchiy kafedroy elektricheskikh mashin Khar'kovskogo politekhnicheskogo instituta imeni Lenina (for Rogachev).
2. Kafedra elektricheskikh mashin Khar'kovskogo politekhnicheskogo instituta imeni Lenina (for Tkachenko).

TKACHENKO, A.N.

Energy relations in photocompensation instruments. Izm.tekh. no.7: 24-27 Jl '62. (MIRA 15:6)

(Photoelectric measurements)

KOTROVSKIY, M.M.; TKACHENKO, A.N.

Mechanized pneumatic feeding of samples for rapid analysis.
Zav.lab. 28 no.6:756-757 '62. (MIRA 15:5)

1. Nachal'nik TSentral'noy laboratorii avtomatiki Makeyevskogo metallurgicheskogo zavoda imeni Kirova (for Kotrovskiy).
2. Nachal'nik TSentral'noy khimicheskoy laboratorii Makeyevskogo metallurgicheskogo zavoda imeni S.M. Kirova (for Tkachenko).

(Makeevka—Metallurgical analysis)
(Pneumatic-tube transportation)

MINTS, M. B.; RABINOVICH, S. G.; SELIBER, B. A.; TKACHENKO, A. N.

New set of photocompensation devices. Priborostroenie no.11:24-26
N '61. (MIRA 14:10)
(Photoelectric measurements)

TKACHENKO, A.N.

"Ukraina" Mine begins operation ahead of schedule. Shakht. stroi. 7 no.8:32 Ag '63. (MIRA 16:11)

1. Shakhtostroitel'noye upravleniye No. 12 Krasnoarmeyskogo shakhtostroitel'nogo tresta.

TKACHENKO, A.N.

Scientific and technological seminar of workers of chemical and spectrum analysis laboratories. Zav.lab. 28 no.2:253 '62. (MIRA 15:3)

1. Predsedatel' sektsii analiza i kontrolya proizvodstva Donetskogo pravleniya Nauchno-tekhnicheskogo obshchestva chernoy metallurgii.
(Chemical laboratories) (Spectrum analysis)

TKACHENKO, A.N.

Photocompensating F18 microvoltameter-weber meter. Trudy inst.
Kom. stand.mer i izm. prib no.64:91-92 '62. (MIRA 16:5)
(Voltameter) (Magnetic measurements—Equipment and supplies)

BASARGIN, N.N.; TKACHENKO, A.N.; STUPA, L.R.; BORODAYEVSKAYA, L.N.

Extraction-photometric determination of titanium in steels with 2,7-dichlorochromotropic acid. Zav.lab. 28 no.11:1311-1313 '62.
(MIRA 15:11)

1. Institut geokhimii i analiticheskoy khimii AN SSSR i Makeyevskiy metallurgicheskiy zavod imeni S.M.Kirova.
(Titanium--Analysis) (Steel--Analysis)
(Naphthalenedisolfonic acid)

TKACHENKO, A.N.

Highly-sensitive photoelectric fluxmeter. Izv.vys.ucheb.zav.; prib. 5 no.4:11-16 '62. (MIRA 15:9)

1. Leningradskiy elektrotekhnicheskiy institut imeni V. I. Ul'yanova (Lenina). Rekomendovana kafedroy elektroizmeritel'noy tekhniki.

(Magnetic measurements)

TKACHENKO, A.N.

Calculation of the characteristics of inductor generators of symmetrical pulses. Izv. vys. ucheb. zav.; elektromekh. 5 no.2:140-154 '62. (MIRA 15:3)

(Electric generators)

TKACHENKO, A.N. (Leningrad)

Concerning the dynamics of the networks of photoelectric amplifiers. Avtom. i telem. 22 no.12:1673-1681 D '61. (MIRA 14:12)
(Amplifiers (Electronics))

TKACHENKO, A.N.

Threshold of response of photoelectric fluxmeters. Izv.vys.ucheb. zav.; prib. 5 no.3:30-36 '62. (MIRA 15:8)

1. Leningradskiy elektrotekhnicheskiy institut imeni V.I.Ul'yanova (Lenina). Rekomendovana kafedroy elektroizmeritel'noy tekhniki.

(Photoelectric measurements)

39335

S/146/62/005/004/002/013
D295/D308

9,6000

AUTHOR: Tkachenko, A.N.

TITLE: Photo-electric fluxmeter of high sensitivity

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, v. 5, no. 4, 1962, 11-16

TEXT: The increase of the sensitivity of photoelectric fluxmeters, beyond the performance indices already achieved (a photo-electric fluxmeter developed at the ВИБРАТОР (Vibrator) factory of electrical measuring instruments, Leningrad, has 2 x 10^{-7} weber x turns/division sensitivity), requires that the drift of the output value of the instrument be further reduced. An analysis of the velocity of drift caused by the restoring torque of the galvanometer coil suspension shows that its reduction gives rise to conflicting requirements. An increase of the gain of the photo-electron-optical amplifier would complicate it unduly. An additional open-loop integration by inserting a capacitor in the grid circuit of the input stage of the amplifier as suggested by S.P. Kapitsa, Zh. tekh. fiz.,

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D295/D308

Photo-electric fluxmeter ...

v. 25, no. 7, 1955, would require frequent re-calibrating. The suggestion here is to use straight positive feedback tapped from the instrument output into the search-coil circuit. A prototype has been developed on this basis, in which drift velocity has been reduced to 0.5×10^{-8} weber/sec. The residual drift is now due to thermal emf's in the galvanometer circuit and the zero drift of the galvanometer. The response transient time is 0.05 sec. The instrument is simple, only slightly affected by mechanical vibrations, and its sensitivity is the best to date: 2×10^{-8} weber/division. There are 3 figures. The English-language reference is: Cioff, P.P., Rev. Sci. Instr. v. 21, no. 7, 1950.

X

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut im. V.I. Ul'yanova (Lenina) (Leningrad Electrotechnical Institute im. V.I. Ul'yanov (Lenin))

SUBMITTED: January 16, 1962

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S/144/62/000/006/008/009
D230/D308

9.2580

AUTHORS: Rogachev, I.S., Candidate of Technical Sciences, Docent, and Tkachenko, A.N., Assistant

TITLE: Calculation of working regimes of a pulse generator in an erosion gap

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Elektromekhanika, no. 6, 1962, 679-683

1/B

TEXT: Fundamental working regions of generators of symmetric pulses and their operation in the erosion gap are considered. For the purpose of analysis it is assumed that during the conducting part of the cycle the potential across the erosion gap is constant and equal to the magnitude of the breakdown voltage. A differential equation for the circuit containing the electrical machine generating the pulses, the erosion gap and the valve is formulated and the solution is obtained. Graphs showing the relation between the current pulse duration and the mean relative current value are given. Two working conditions are possible: (i) The current due to the positive emf half-cycle ends before the negative half-cycle reaches the break-

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Calculation of working regimes ...

S/144/62/000/006/008/009
D230/D308

down value, and the current pulses, due to the voltage half-cycles of various polarities are time-spaced. This regime can be considered as a superposition of two half-waves. A relation is given for the calculation of the mean current value. (ii) In the second condition the current duration, for a single half-cycle rectification, is larger than the emf half-cycle. The current as in the case of the sinusoidal emf action, crosses the zero points not at the moment when the emf reaches breakdown value, but a little later. There are 3 figures.

ASSOCIATION: Khar'kovskiy politekhnicheskiy institut (Khar'kov Polytechnic Institute)

SUBMITTED: February 7, 1962

Card 2/2

S/146/62/005/003/004/014
D234/D308

AUTHOR: Tkachenko, A.N.

TITLE: Sensitivity threshold of photoelectric flux meters

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, v. 5, no. 3, 1962, 30-36

TEXT: The author considers the effect of the following disturbances on the threshold sensitivity: 1) Electromagnetic disturbances in the measuring circuit; 2) Mechanical concussions of the movable part of the galvanometer; 3) Thermal motion of the movable part of the galvanometer; 4) Instability of thermal emf in the input circuit and drift of the movable part of the galvanometer; 5) Noises of the photoelectric amplifier. It is concluded that nos. 1 and 2 do not affect the sensitivity to a large extent, no. 5 can be reduced to a negligible level, and the sensitivity threshold is theoretically determined by no. 3, and in practice limited by no. 4; it can be made to be of the order of 10^{-8} vbvit /Abstracter's note: Not defined/. V.L. Granovskiy, S.G. Rabinovich are mentioned for their

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S/146/62/005/003/004/014
D234/D308

Sensitivity threshold ...

contributions. There is 1 figure.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut im. V.I. Ul'yanova (Lenina) (Leningrad Institute of Electrical Engineering im. V.I. Ul'yanov (Lenin))

SUBMITTED: October 17, 1961

RABINOVICH, S.G.; TKACHENKO, A.N.

Universal photocompensation amplifier. Prib. i tekh.eksp. 6 no.4:96-98 Jl-Ag '61. (MIRA 14:9)

1. Leningradskiy zavod elektroizmeritel'nykh priborov "Vibrator".

(Amplifiers (Electronics))

TKACHENKO, A.N.

Conference in Stalino on new methods of production control. Zav.lab. 25 no.10:1277 '59. (MIRA 13:1)

1. Predsedatel' sektsii analiza i kontrolya proizvodstva stalinskogo oblastnogo pravleniya nauchno-tekhnicheskogo otdela chernoy metallurgii.
(Metallurgical analysis--Congresses)

SOV/115-59-5-16/27

9(3), 28(2)

AUTHORS: Rabinovich, S.G. and Tkachenko, A.N.

TITLE: To the Calculation of Photoelectric Fluxmeters

PERIODICAL: Izmeritel'naya Tekhnika, 1959, Nr 5, pp 30-35 (USSR)

ABSTRACT: The authors state that photoelectric fluxmeters can attain a higher sensivity than any other service, if they work with a galvanometer. Fig.2 gives the structural scheme of this fluxmeter. The setting is; 1) Measuring coil; 2) transformer for the voltage difference; 3) Galvanometer; 4) photoelectric amplifier; 5) stabilizing link; 6) electron amplifier; 7) negative regeneration coupling. The authors analyse the dynamic characteristics of the photoelectric fluxmeter while it is measuring magnetic current. The transmission function is derived from the function with a condition zero. The input influence is regarded as gradual. After deriving the complete transmission function, the parameters are calculated for the measuring of spontaneous magnetic current. The calculation of a numerical example is added. The presented correlations give the possibility of making calculations for a highly sensitive photo-

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SOV/115-59-5-16/27

To the Calculation of Photoelectric Fluxmeters

electric fluxmeter. For the measuring the changing of a magnetic current, constants are given. The data of the presented calculation were completely confirmed by tests. There are 2 block diagrams, 19 equations and 6 references, 4 of which are Soviet, 1 English and 1 German.

Card 2/2

TKACHENKO, A.N.

Field distribution in the magnetic circuit of induction pulse generators. Izv. vys. ucheb. zav.; elektromekh. 3 no.11:38-45 '60. (MIRA 14:2)

(Electric generators)

S/144/60/000/04/007/017
E194/E455

AUTHORS: Rogachev, I.S., Candidate of Technical Sciences, Dotsent and Tkachenko, A.N.

TITLE: Induction-Type Unipolar Impulse Generators with External Rectification

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Elektromekhanika, 1960, Nr 4, pp 40-47 (USSR)

ABSTRACT: The various types of unipolar impulse generators used for spark machining are briefly reviewed. In principle, the simplest approach is to rectify the output of a generator of alternate impulses but it is difficult to use commutators for this purpose at high frequencies. Thus, the idea arose of developing induction impulse generators having a symmetrical voltage wave shape composed of impulses of identical duration and amplitude and alternate sign, which are then combined by an external rectifier. The flux wave shape necessary to generate a certain emf wave shape is first considered. Eq (3) is derived for the flux curve required to obtain a square wave shape. The induction generators that are used may have half-open stator slots and rectangular

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S/144/60/000/04/007/017
E194/E455

Induction-Type Unipolar Impulse Generators with External Rectification

rotor slots, as shown in Fig 2. The principle of obtaining impulse emf with this type of construction is then explained and the flux distribution is given by Eq (5). The frequency of the emf induced in the stator is given by Eq (7) and the emf wave shape is readily determined. The induction generator may also be made with the rotor teeth wider than the stator teeth, as shown diagrammatically in Fig 3. This case is considered and it is found that whilst in many cases it can give improved impulse emf wave shape, the cross-section of the magnetic circuit must be greater so that the machine becomes appreciably larger. In order to verify the operating principles and working characteristics of these induction generators the Khar'kov Polytechnical Institute developed and studied two prototypes. They had narrow rotor slots for frequencies of 2000 and 3000 impulses per second, with an external full-wave rectifier. The resulting generator, designated type IGI-1, is then described. It develops 3000 c/s at

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3000 rpm with a rated mean current of 50 A and a voltage peak value of 110 V. The construction is briefly described with photographs of the completed generator in Fig 5, of the rotor and end-plate in Fig 6 and of the stator in Fig 7. The output was rectified in a full-wave bridge circuit by an external germanium rectifier type SVG-50-55, which proved very reliable. An oscillogram of the no-load voltage taken with full-wave rectification is given in Fig 8; Fig 9 and 10 are oscillograms of voltage and current respectively when operating on resistive load with full-wave rectification. By altering the rectifier to half-wave rectification, the frequency and emf characteristics of the generator may be modified. When operating with full wave rectification and a resistive load, the efficiency of the generator is about 80%. It has been used successfully in cutting small holes in slots in hard alloys and also in raising the speed of spark machining. There are 10 figures and

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Induction-Type Unipolar Impulse Generators with External Rectification

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6 Soviet references.

ASSOCIATION: Khar'kovskiy politekhnicheskiy institut
(Khar'kov Polytechnical Institute)

SUBMITTED: June 10, 1959

Card 4/4

AUTHOR: Tkachenko, A. N. SOV/120-59-5-43/46

TITLE: An Effective Method for the Stabilization of Filament Currents

PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 5, p 145 (USSR)

ABSTRACT: The basic circuit of the stabilizer is shown in Fig 1. The current is rectified by the germanium diode Д. The circuit includes a semiconductor triode T (P4U) with a common emitter in series with the load r_{Ha2p}. The base is supplied from the voltage stabilized source U_{cm}. Because of the non-linearity of the output characteristics of the triode, the collector current I_c is not very dependent on changes in the rectified voltage U_{num} and hence it is also not very dependent on changes in the mains voltage U_{cemu} in the primary of the step-down transformer T_p. By changing the resistance r_6 it is possible to establish the required value of the base current I_6 and hence of I_c. The resistance r_{oc} is used to stabilize the current I_c in the usual way (feed-back). It is convenient to use I-4D and P4U diodes

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SOV/120-59-5-43/46

An Effective Method for the Stabilization of Filament Currents

which have current amplification coefficients greater than 20 (earthed emitter). In that case, with a base current of 10 to 40 mA the circuit stabilizes currents up to 1 A.

There are 2 figures and 1 Soviet reference.

ASSOCIATION: Leningradskiy zavod elektroizmeritel'nykh priborov "Vibrator" (Leningrad Works for Electrical Measuring Instruments "Vibrator")

SUBMITTED: August 16, 1958

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05771

28(1)

SOV/32-25-10-60/63

AUTHOR: Tkachenko, A. N., Head of the Section for the Analysis and Production-control of the Stalinskoye oblast'noye pravleniye NTO chernoy metallurgii (Stalino oblast' Administration NTO for Iron Metallurgy)

TITLE: Conference in the City of Stalino on New Control Methods

PERIODICAL: Zavodskaya laboratoriya, 1959, Vol 25, Nr 10, p 1277 (USSR)

ABSTRACT: In June 1959 the scientific-technical conference on new chemical, physico-chemical, and spectroscopic analysis in the production control of the metallurgical and metal-working industry was held. The conference was attended by 90 delegates of chemical laboratories and of 14 plants of the Stalino sovnarkhoze, representatives of scientific research institutes, and institutes of higher learning. 17 lectures were delivered on new methods of analyzing raw materials and on the production figures of metallurgical plants. It was decided to introduce the following methods into industry: Physico-chemical analysis of alloys for their lead-, bismuth-, cadmium-, zinc-, molybdenum-, and niobium content (P. Ya. Yakovlev, G. P. Razumova, M. I. Lykova, TsNIIChM); slag analysis by using urotropin and trilon B (V. D. Konkin, V. I. Zhikhareva, Khar'kov, Institut

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Conference in the City of Stalino on New Control Methods

metallov (City of Khar'kov, Institute of Metals)); spectroscopic method of analysis of burnt ore and fluxing agglomerates for the copper-, zinc-, and lead content (A. I. Butova, zavod im. Kirova, g. Makeyevka (Plant imeni Kirov, city of Makeyevka)); application of polarographic methods for the determination of a number of elements in ferrous metal analysis (P. Ya. Yakovlev, R. D. Malinina, G. P. Razumova, M. S. Dymova, TsNIIChM); accelerated photocolorimetrical method for the determination of small quantities of aluminum and aluminum oxide in carbon-containing steels (V. D. Konkin, I. M. Gol'tsberg, g. Khar'kov, Institut metallov (City of Khar'kov, Institute of Metals)); photocolorimetric and complexometric methods in the analysis of welding flux of the types AN-14, AN-26, and AN-20 ([illegible]. Ya. Mashkovskiy, zavod im. Il'icha, g. Zhdanov (Plant imeni Il'ich, city of Zhdanov)); amperometric titration of metals with organic reagents (Yu. I. Usatenko, g. Dnepropetrovsk, Khimiko-tekhnologicheskiy institut (City of Dnepropetrovsk, Chemico-Technological Institute)); determination of low ion-concentrations according to the extraction method (M. P. Babkin, Donetskiy industrial'nyy institut (Donets Industrial Institute)); device for the automatic determination

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of sulphur in metals (K. P. Osipenko, Yenakiyevskiy metallurgicheskiy zavod (Yenakiyevo Metallurgical Plant)); determination of small boron quantities in the alloys of ferrous metals by means of carmine (L. A. Kvichko, g. Khar'kov, Institut metallov (City of Khar'kov, Institute of Metals)). Several faults were pointed out, e.g. that in some plants no research groups were active (e.g. Metallurgicheskiy zavod im. Kuybysheva (Metallurgical Plant imeni Kuybyshev) , Kramatorskiy mashinostroitel'nyy zavod im. Stalina (Kramatorsk Machine Building Plant)etc.). The conference recommends that seminars be established and excursions be organized among the various plants.

ASSOCIATION: Sektsiya analiza i kontrolya proizvodstva Stalinskogo oblastnogo pravleniya NTO chernoy metallurgii (Section for Analysis and Production-control of the Stalino oblast' Administration NTO for Iron Metallurgy)

Card 3/3

RABINOVICH, S.G.; TKACHENKO, A.N.

Photocompensated regulated rectifiers. Izm.tekh. 20 no.1:39-40
Ja '59. (MIRA 11:12)
(Electric controllers)

TKACHENKO, A.N.

Craftsman Making Controlling-Measuring Devices in the Oil Trade. Gostoptekhizdat, 1955, 128 p, price: rubles 3.60. Admitted......as test-book for preparation, and raising qualifications of, craftsmen in controlling-measuring devices. Constructions described of various controlling-measuring devices widely used at present in the oil trades, their mounting and calibration. Practical advice on repair and utilization of these devices.

So: A- 3090689

TKACHENKO, A.N.; GELLER, R.A.

Method for the rapid determination of calcium oxide in a fluxed agglomerate. Zav.lab. 22 no.5:543 '56. (MLRA 9:8)

1. Makeyevskiy metallurgicheskiy zavod imeni Kirova.
(Lime)

MINTS, M.B.; RABINOVICH, S.G.; SELIBER, B.A.; TKACHENKO, A.N.

Designing photoelectric compensation devices. Izm.tekh. no.9:31-34 S '61. (MIRA 14:8)
(Photoelectric measurements)

TKACHENKO, A.N.

Seminar of workers of chemical and spectura analysis laboratories of the Donets Basin. Zav.lab. 28 no.10:1277 '62.
(MIRA 15:10)

1. Predsedatel' sektsii analiza i kontrolya proizvodstva Donetskogo oblastnogo pravleniya Nauchno-tekhnicheskogo obshshestva chernoy metallurgii.
(Donets Basin—Metallurgical laboratories)

S/144/62/000/002/004/007
D289/D301

AUTHOR: Tkachenko, Anatoliy Nikolayevich, Assistent (see Association)

TITLE: Calculating the characteristics of symmetrical impulse induction generators

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Elektromekhanika, no. 2, 1962, 140 - 154

TEXT: The analysis applies to unipolar machines, but it can be used for heterpolar types. The author assumes that permeability does not change with magnetic field neglects hysteresis and considers the flux as the sum of the stator, the rotor and the damper winding fluxes. He assumes the stator flux to have transverse and longitudinal components due to slot and overhang currents respectively. Using equations of flux linkages he arrives at

$$e_o = r_c i_c + L_o \frac{di_c}{dt} + U_c \qquad (6)$$

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where e_o - emf on no-load with stator winding open circuited; r_c - stator resistance; i_c - stator current; U_c - stator terminal voltage; L_o - constant component of the total inductance. The solution of the Eq. (6) is

$$i_c = e^{-\rho(t-t_l)} \int \frac{e_{ol}(t - t_l)}{L_o} e^{\rho(t-t_l)} dt + G_l e^{-\rho(t-t_l)} \qquad (7)$$

where $\rho = R/L_o$; t_l - instant of time corresponding to the lth interval; $e_{ol}(t - t_l)$ - emf function on no-load in the lth interval $(t_l < t < t_{l+1})$; G_l - const. Shape of the emf per turn can be found from the gap field distribution from formulas due to R. Richter and I.S. Rogachev. Instantaneous emf for stator winding is given as 3 cycle interval equations. The author gives formulas for the time intervals as functions of tooth geometry and notes that this affects the emf waveform. The author evolves equations for current and voltage as a set of three interval equations to get the form, max. va-

Calculating the characteristics of ... S/144/62/000/002/004/007
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lues, RMS and average values; also, empirical formulas are given for a generator with narrow teeth. An expression for no-load form factor is given, and using Fourier analysis, expressions for harmonics are obtained. Comparison is given between the calculated and experimental values from a model 2400 rpm machine having an emf frequency of 1000 c/s, stator current of 20 amp. Characteristics are shown graphically at fully reactive loading with no-load emf of 172.6 V, field current of 1 amp. and frequency of 1000 c/s. The calculated and the experimental graphs are in close agreement showing that the approximations and assumptions employed were justified. There are 4 figures and 6 Soviet-bloc references.

ASSOCIATION: Kafedra electricheskikh mashin, Khar'kovskiy politekhnicheskiy institut (Department of Electrical Machines, Khar'kov Polytechnic Institute)

SUBMITTED: March 8, 1961

Card 3/3

TKACHENKO, Anatoliy Nikolayevich, assistent

Consideration of the effect of the stator field on the working process of symmetrical pulse inductor alternators. Izv. vys. ucheb. zav.; elektromekh. 5 no.12:1336-1344 '62. (MIRA 16:6)

1. Kafedra elektricheskikh mashin Khar'kovskogo politekhnicheskogo instituta.

(Electric generators)

ROGACHEV, Ivan Sergeyevich, kand. tekhn. nauk, dotsent; TKACHENKO,
Anatoliy Nikolayevich, assistent

Calculation of the operation of a pulse generator with an erosion gap. Izv. vys. ucheb. zav.; elektromekh. 5 no.6:679-683 '62.
(MIRA 15:10)

1. Zaveduyushchiy kafedroy elektricheskikh mashin Khar'kovskogo politekhnicheskogo instituta (for Rogachev). 2. Kafedra elektricheskikh mashin Khar'kovskogo politekhnicheskogo instituta (for Tkachenko).

(Oscillators, Electric) (Pulse circuits)

ACC NR: AP6034598

SOURCE CODE: UR/0115/66/000/010/0075/0076

AUTHOR: Akhmatov, A. S.; Bufeyev, V. A.; Korndorf, S. F.; Tkachenko, A. N.

ORG: none

TITLE: A photoamplifier with sliding contactless photopotentiometer

SOURCE: Izmeritel'naya tekhnika, no. 10, 1966, 75-76

TOPIC TAGS: photomultiplier, image amplification, circuit design

ABSTRACT: A new design of a photoamplifier is reported in which a sliding contactless photopotentiometer serves as the photosensitive element. The basic circuit diagram of the photoamplifier is shown in Fig. 1. The principle of operation of the proposed amplifier is as follows: with the aid of lens L and mirror galvanometer G, slot D is projected on the photosensitive layer of the potentiometer producing a conducting bridge on it. When the amplified signal current is not flowing through the galvanometer, the slot image is in the central position; in this case the resistance of the resistive layer is split in two parts (i.e., the output voltage across the load R_n is equal to zero). When the amplified signal current is flowing through the potentiometer, the galvanometer mirror is deflected as a result of which the slot image is shifted to one or to the other side acting as a sliding optical contact. Because of this, at the output of the circuit there will be a current flowing through the mirror galvanometer and to the voltage in the photopotentiometer. The photoamplifier circuit

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UDC: 621.383

ACC NR: AP6034598

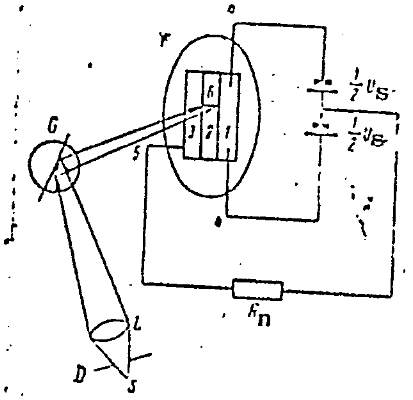

Fig. 1. Photoamplifier

F - Potentiometer; S - light source; D - slot diaphragm; L - focusing lens; G - mirror galvanometer; 1 - resistive layer; 2 - photosensitive layer; 3 - conducting slip ring; 4 - resistive layer leads; 5 - slip ring lead; 6 - slot image on the photosensitive layer; U_s - ac or dc power supply source; R_n - load resistance.

has the following advantages over the existing ones: 1) high linearity of the amplitude characteristic, 2) higher gain with respect to current and voltages, 3) the gain is not affected by unavoidable voltage and current fluctuations in the power supply circuit of the light source, and 4) the sensitivity threshold of the amplifier is determined by the sensitivity threshold of the mirror galvanometer. Orig. art. has: 3 figures.

SUB CODE: 09/ SUBM DATE: 11May66/ ORIG REF: 007/ OTH REF: 001

Card 2/2

SEGEYEV, N.N.; IVANOV, K.V.; FEDIN, A.F.; KRASOVSKIY, Yu.P.; TKACHENKO, A.P.

Rapid building of the Pervomayskiy open-pit mine in the Severnoye
Mining and Ore Dressing Combine. Met. i gornorud. prom. no.3:73-74
My-Je '63. (MIRA 17:1)

TKACHENKO, A.P., inzh.; KRASOVSKIY, Yu.P., inzh.; TKACHEV, S.I., inzh.

Shape of explosion craters and delay intervals in blasting high benches. Shakht. stroi. 8 no.10:8-9 O '64. (MIRA 17:12)

1. Krivorozhskiy gornorudnyy institut (for Tkachenko, Tkachev).
2. Nauchno-issledovatel'skiy gornorudnyy institut, Krivoy Rog (for Krasovskiy).

TKACHENKO, A.P., inzh.

Blasting ratio of detonating charges in cut holes and boreholes. Vzryv. delo no.57/14:228-232 '65. (MIRA 18:11)

1. Krivorozhskiy filial Instituta gornogo dela AN UkrSSR imeni Fedorova.

TKACHENKO, A.P.

Device for the transmission of scantlings to a dovetailing machine in semiautomatic lines. Bum. i der. prom. no.2:10-11 Ap-Je '64. (MIRA 17:9)

KRASOVSKIY, Yu.P., gornyy inzh.; VARAVA, I.P., gornyy inzh., GLADUN, G.A.,
gornyy inzh.; TKACHENKO, A.P., gornyy inzh.; SHTAN'KO, V.I.,
gornyy inzh.

Using various types of transportation in Krivoy Rog Basin mines.
Ugol' Ukr. 7 no.11:38-39 N '63. (MIRA 17:4)

TKACHENKO, A.P., gornyy inzh.

Increasing the rate of deepening mine workings in open pits.
Gor.zhur. no.8:19-21 Ag '62. (MIRA 15:8)

1. **Krivorozhskiy** gornorudnyy institut.
(Strip mining)

DUBENYUK, V.M., gornyy inzh.; TKACHENKO, A.P., gornyy inzh.;
DROBOT, B.Ya., gornyy inzh.; NEMCHENKO, A.A., gornyy inzh.;
MOROZOV, Ye.G., gornyy inzh.

Effect of large-scale blasting on the atmospheric conditions in open pits. Sbor. nauch. trud. KGRI no.13:74-76 '62.
(MIRA 16:8)

(Krivoy Rog Basin--Blasting)

SERGEYEV, N.N., inzh.; IVANOV, K.V., inzh.; KRASOVSKIY, Yu.P., inzh.;
TKACHENKO, A.P., inzh.

Construction of the Pervomai open-pit mine. Shakht. stroi. 7 no.4:
25-26 Ap '63. (MIRA 16:3)

1. Severnyy gornoobogatitel'nyy kombinat (for Serveyev, Ivanov).
2. Nauchno-issledovatel'skiy gornorudnyy institut (for Krasovskiy).
3. Krivorozhskiy gornorudnyy institut (for Tkachenko).

TKACHENKO, A.P., gornyy inzh.; KRASOVSKIY, Yu.P., gornyy inzh.;
DUBENYUK, V.M., gornyy inzh.; OVCHINNIK, I.T., gornyy inzh.

Expansion of short-delay blasting in Krivoy Rog Basin strip mines. Sbor. nauch. trud. KGRI no.15:79-82 '63.
(MIRA 17:8)

TKACHENKO, A.F.; TKACHUK, K.N.; CHERNYY, B.Ye.; KRASOVSKIY, Ye.F.

Dependence of the coefficient of the loosening up of rock on the technology of blasting operations in a strip mine. Sbor. nauch. trud. KGRI no.23:13-27 '63 (MIRA 17:3)

BUTENKO, Yu.T., inzh.; KRASOVSKIY, Yu.P., inzh.; TKACHEV, S.I., inzh.;
TKACHENKO, A.P., inzh.

Signal for high-speed photography in flame detonation. Met.i gornorud.prom. no.5:84 S-O '62. (MIRA 16:1)
(Detonation) (Photography, High-speed)

ZINENKO, V.A.; PODKOSHA, G.P.; TERESHCHENKO, A.A.; TKACHENKO, A.P.;
KRASOVSKIY, Yu.P.

Ways of lowering the seismic action of large-scale blasts in a pit of the Central Ore Dressing Combine. Gor. zhur. no.9:72 S '62. (MIRA 15:9)

(Krivoy Rog Basin—Blasting)

TKACHENKO, Aleksandr Pavlovich; LOZBYAKOVA, Ye.S., redaktor; TROFIMOV, A.V., tekhnicheskiy redaktor .

[Mechanic in charge of controlling and measuring instruments in the petroleum industry] Slesar' po kontrol'no-izmeritel'nym priboram na neftianom promysle. Moskva, Gos.nauchno-tekhn.izd-vo neftianoi i gorno-toplivnoi lit-ry, 1955. 124 p. (MLRA 8:12)
(Petroleum industry--Equipment and supplies)
(Measuring instruments)

KITACH, G.M., dotsent, kand.tekhn.nauk; TKACHENKO, A.P., gornyy inzhener;
ZHOVANIK, V.P., gornyy inzhener

Practice of using composite charges with air spaces in short-delay blasting. Vzryv. delo no.47/4:103-111 '61. (MIRA 15:2)

1. Krivorozhskiy gornorudnyy institut.
(Krivoy Rog Basin--Blasting)

KITACH, G.M., dotsent, kand.tekhn.nauk; TKACHENKO, A.E., gornyy inzhener;
ZHOVANIK, V.P., gornyy inzhener

Analytical determination of the relationship of the blasting parameters in forming a crosscut in a multirow short-delay blasting layout. Vzryv. delo no.47/4:223-230 '61. (MIRA 15:2)

1. Krivorozhskiy gornorudnyy institut.
(Blasting)

TKACHENKO, A.P.

Automatic control in petroleum production. Neftianik 1 no.4:
25-28 Ap '56. (MLRA 9:10)

1. Zamestitel' nachal'nika tsekha kontrol'no-izmeritel'nykh
priborov neftepromyslovogo upravleniya Tuymazaneft'.
(Automatic control) (Oil wells--Equipment and supplies)

TKACHENKO, A.P., inzh.

[redacted]

Crushing rock in multirow short-delay blasting in digging
trenches. Vzryv. delo no.51/8:240-247 '63. (MIRA 16:6)

1. Krivorozhskiy gornorudnyy institut.
(Blasting) (Strip mining)

VOLYNETS, M.A., gornyy inzh.; KIKOVKA, Ye.I., gornyy inzh.; TKACHENKO, A.P.

Blasting operations in the pit of the New Krivoy Rog Mining and Ore Dressing Combine. Vzryv. delo no.53/10:163-171 '63. (MIRA 16:8)

1. Novo-Krivorozhskiy gornoobogatitel'nyy kombinat imeni Leninskogo komsomolo (for Volynets, Kikovka). 2. Krivorozhskiy gornorudnyy institut (for Tkachenko).

(Krivoy Rog Basin--Blasting)

TKACHENKO, A.P., inzh.; [illegible]

Methods of determining the number of simultaneously [illegible] of benches in open-pit mining. Gor. zhur. [illegible]
(MIRA [illegible])

1. Krivorozhskiy filial [illegible] Fedorova (for Tkachenko). [illegible] Krivorozhskiy gornoobogatitel'nyy kombinat imeni Leninskogo komsomola (for [illegible]).

SOV/137-59-7-15728

Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 7, p 220 (USSR)

AUTHORS: Shul'te, Yu.A., Kurbatov, M.I., Tkachenko, A.S., and Slonim, D.M.

TITLE: Ways to Improve High-Manganese "G13L" Steel

PERIODICAL: Tekhn.-ekon. byul. Sovnarkhoz Zaporozhsk. ekon. adm. r-na, 1958, Nr 7, pp 24 - 29

ABSTRACT: Investigations were carried out into the effect of modification of "G13L" steel by Fe-Ti addition causing the development of Ti-nitrides in steel which limit the grain growth. It was stated that Fe-Ti additions increased 1.5 times the durability of crusher hammers. Improvement of mechanical properties of "G13L" steel is characterized by the following data: σ_b from 55.6 to 78.4 kg/mm^2; σ_o from 39.0 to 42.0 kg/mm^2; δ from 19.8 to 28.8%; ψ from 17.5 to 28.9%; H_B from 206 to 218. For "G13L" steel Al is not a modifier but only a deoxidizer.

T.F.

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TKACHENKO, A.S., inzh.

Some problems of automatically regulating the thickness of rolled metal. Izv.vys.ucheb.zav.; chern.met. no.10:85-96 0 '58. (MIRA 11:12)

1. Dnepropetrovskiy metallurgicheskiy institut.
(Rolling mills--Electric driving) (Automatic control)

S/148/60/000/008/005/018
A161/A029

AUTHORS: Kozhevnikov, S.N.; Tkachenko, A.S.

TITLE: Determination of Efforts in Cold Rolling With Tension

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. - Chernaya metallurgiya, 1960, No. 8, pp. 88 - 95

TEXT: The article deals with the determination of forces acting on the rolls of a continuous cold rolling mill rolling thin strips. In works published recently, the yield limit increase is presented in a straight line with a constant inclination angle to the rolling direction. In the experiments here with low-carbon steel the yield limit change was obtained as a function of deformation. The process is mathematically analyzed. Formulas are derived for the calculation of the effect of front and rear tension, mean specific pressure, with tension and deformation strengthening (15). Formula (15) is reduced into the final simple form:

$$p^{H}_{cp} = p_{cp}\,(n_{\varphi} - n_{\sigma}) = p_{cp}n_{\varphi\sigma}$$

where p_{cp} is the specific pressure value taken without the effect of strengthening and tension of metal, and the other designations (n_{φ}, n_{σ} and $n_{\varphi\sigma}$) are intro-

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